

IN THE CLAIMS

Please amend the claims as follows:

Claim 1-14 (Canceled).

Claim 15 (Currently Amended): A system for protecting a communication device against a denial-of-service attack, the system comprising:

a monitoring device provided on a local area network including the communication device, the monitoring device being configured to monitor a packet transmitted to the communication device via an internet-service-provider network; and

a restricting device provided on the internet-service-provider network, the restricting device being configured to restrict a packet to the local area network,

wherein the monitoring device includes

an attack detecting unit configured to detect an attack by the packet on the communication device based on an attack detection condition including a destination address and a port number of the packet, and

a protection-request-information transmitting unit configured to transmit to the restricting device protection request information indicating a request for protection against the attack, the protection request information including a certificate authenticating the monitoring device, a signature indicating a feature including the destination address and the port number of a packet that attacks the communication device, the protection-request-information transmitting unit being configured to update the protection request information to remove packets not included in the attack from restriction based on a report of received packets transmitted from the restricting device, and

the restricting device includes a packet restricting unit configured to restrict a packet transmitted to the communication device via the internet-service-provider network based on the protection request information.

Claim 16 (Currently Amended): The system according to claim 15, wherein
the monitoring device further includes a signature generating unit configured to generate ~~[[a]] the signature indicating a feature of a packet that attacks the communication device,~~

the protection-request-information transmitting unit transmits the protection request information including the signature to the restricting device, and
the packet restricting unit restricts a packet corresponding to the signature.

Claim 17 (Previously Presented): The system according to claim 16, wherein
the restricting device further includes a signature determining unit configured to determine whether the protection request information including the signature is appropriate based on the certificate, and

the packet restricting unit restricts a packet corresponding to a signature determined to be appropriate, and does not restrict a packet corresponding to a signature determined to be inappropriate.

Claim 18 (Previously Presented): The system according to claim 16, wherein
the restricting device further includes

a report generating unit configured to generate a report including a feature and an amount of packets corresponding to the signature, and a report transmitting unit configured to transmit the report to the monitoring device,

the signature generating unit generates a new signature based on the report,
the protection-request-information transmitting unit transmits the protection request information including the new signature to the restricting device, and
the packet restricting unit restricts a packet corresponding to the new signature.

Claim 19 (Previously Presented): The system according to claim 18, wherein
the restricting device further includes a forwarding unit configured to forward the protection request information to other restricting devices provided on the internet-service-provider network, the forwarding unit being configured to determine whether to forward the protection request information based on the report generated by the report generating unit.

Claim 20 (Previously Presented): The system according to claim 17, wherein
the restricting device further includes a determination-result transmitting unit configured to transmit a determination result of the signature determining unit to the monitoring device, the signature generating unit of the monitoring device generating a new signature indicating the feature of the packet that attacks the communication device when the determination result indicates that the signature is inappropriate.

Claim 21 (Currently Amended): A method of causing a monitoring device and a restricting device to protect a communication device against a denial-of-service attack, the monitoring device being provided on a local area network including the communication device and being configured to monitor a packet transmitted to the communication device via an internet-service-provider network, the restricting device being provided on the internet-service-provider network and being configured to restrict a packet to the local area network, the method comprising:

detecting, at the monitoring device, an attack by the packet on the communication device based on an attack detection condition including a destination address and a port number of the packet;

transmitting, from the monitoring device to the restricting device, a protection request information indicating a request for protection against the attack, the protection request information including a certificate authenticating the monitoring device, a signature indicating a feature including the destination address and the port number of a packet that attacks the communication device;

restricting, at the restricting device, packets transmitted to the communication device via the internet-service-provider network based on the protection request information;

transmitting, from the restricting device to the monitoring device, a report including information on packets included the attack; and

transmitting, from the monitoring device to the restricting device, an updated protection request information removing packets not included in the attack from restriction based on the report.

Claim 22 (Currently Amended): The method according to claim 21, further comprising:

generating, at the monitoring device, ~~[[a]]~~ the signature ~~indicating a feature of a packet that attacks the communication device,~~ wherein

protection request information transmitted to the restricting device includes the signature, and

a packet corresponding to the signature is restricted.

Claim 23 (Previously Presented): The method according to claim 22, further comprising:

determining, at the restricting device, whether the protection request information including the signature is appropriate based on the certificate,

wherein a packet corresponding to a signature determined to be appropriate is restricted, and a packet corresponding to a signature determined to be inappropriate is not restricted.

Claim 24 (Previously Presented): The method according to claim 22, further comprising:

generating, at the restricting device, a report on a feature and an amount of packets corresponding to the signature; and

transmitting the report from the restricting device to the monitoring device,

wherein a new signature is generated at the monitoring device based on the report, protection request information including the new signature is transmitted to the restricting device, and a packet corresponding to the new signature is restricted.

Claim 25 (Currently Amended): A non-transitory computer-readable medium storing thereon computer-readable instructions for protecting a communication device against a denial-of-service attack using a monitoring device and a restricting device, the monitoring device being provided on a local area network including the communication device and being configured to monitor a packet transmitted to the communication device via an internet-service-provider network, the restricting device being provided on the internet-service-provider network and being configured to restrict a packet to the local area network, the

computer-readable instructions when executed by a computer cause the computer to perform the method comprising:

detecting, at the monitoring device, an attack by the packet on the communication device based on an attack detection condition including an address and a port number of the packet;

transmitting, from the monitoring device to the restricting device, protection request information indicating a request for protection against the attack, the protection request information including a certificate authenticating the monitoring device, a signature indicating a feature including the destination address and the port number of a packet that attacks the communication device;

restricting, at the restricting device, a packet transmitted to the communication device via the internet-service-provider network based on the protection request information;

transmitting, from the restricting device to the monitoring device, a report including information on packets included the attack; and

transmitting, from the monitoring device to the restricting device, an updated protection request information removing packets not included in the attack from restriction based on the report.

Claim 26 (Currently Amended): The non-transitory computer-readable medium according to claim 25, further comprising:

generating, at the monitoring device, ~~[[a]] the signature indicating a feature of a packet that attacks the communication device;~~

transmitting, from the monitoring device to the restricting device, the protection request information including the signature; and

restricting, at the restricting device, a packet corresponding to the signature.

Claim 27 (Previously Presented): The non-transitory computer-readable medium according to claim 26, further comprising:

determining, at the restricting device, whether the protection request information including the signature is appropriate based on the certificate;
restricting a packet corresponding to a signature determined to be appropriate; and
not restricting a packet corresponding to a signature determined to be inappropriate.

Claim 28 (Previously Presented): The non-transitory computer-readable medium according to claim 26, further comprising:

generating, at the restricting device, a report on a feature and an amount of packets corresponding to the signature; and
transmitting the report from the restricting device to the monitoring device;
generating, at the monitoring device, a new signature based on the report;
transmitting, from the monitoring device to the restricting device, the protection request information including the new signature; and
restricting, at the restricting device, a packet corresponding to the new signature.